Celebrate National Pollination Week

With Malheur NWR

June 20-26th

Pollination: Where did all the pollinators go?

Pollination occurs when pollen is moved within flowers or carried from flower to flower by pollinating animals such as birds, bees, bats, butterflies, moths, beetles, or other animals, or by the wind. This transfer of pollen in and between flowers of the same species leads to fertilization, and successful seed and fruit production for plants. Pollination ensures that a plant will produce full-bodied fruit and a full set of viable seeds.

Pollinators matter to us because:

- Worldwide, roughly 1,000 plants grown for food, beverages, fibers, spices, and medicines need to be pollinated by animals in order to produce the goods on which we depend.
- Foods and beverages produced with the help of pollinators include: apples, blueberries, chocolate, coffee, melons, peaches, potatoes, pumpkins, vanilla, almonds, and tequila.
- In the United States, pollination by honey bees, native bees, and other insects produces $40 billion worth of products annually.

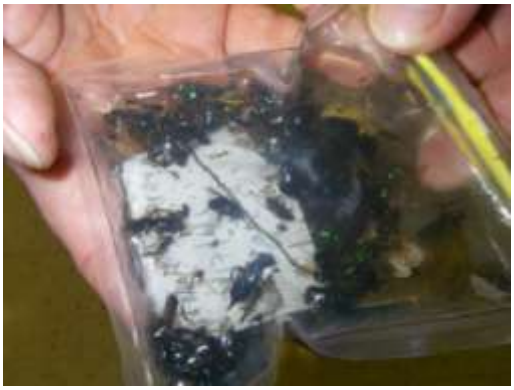
However, there is disturbing evidence that pollinators are declining due to habitat loss; chemical misuse; introduced and invasive plan and animal species; and diseases and parasites. More importantly, a lack of research has hindered our knowledge about the status of pollinators worldwide. The European Union has been so concerned that they have invested over $20 million investigating the status of pollinators in Europe. The United States has lost over 50% of its managed honeybee colonies over the past 10 years.

Malheur National Wildlife Refuge is taking measures to attract and promote pollinators and pollination through habitat restoration; surveys and monitoring; and enhancement projects to better understand this critical cycle and make such information available to and known by the public.

Pollinator Monitoring and Surveying:

Last year, the Youth Conservation Corp completed a pollination study at two sites within the Refuge Boundary. Many pollinators were collected and this summer they will again go to different habitat types to collect pollinators.

Currently, a five year study is underway at Malheur National Wildlife Refuge headquarters in means of gathering more information about the pollination population and diversity in an form of an array 40 meters in diameter with 8 sample sites. the first pollination collection was conducted the week of May 6, 2011. Every two weeks samples are collected from cups in the array that are painted with special attractant colors and filled with a 50% mixture of propylene glycol and water. The samples are preserved in 90% Ethanol as shown in the picture below. These samples are sent to the Regional biologist for identification.



On June 4, 2011 a butterfly survey was conducted at several different locations on the Refuge: Krumbo Lake, Page Springs, and P Ranch. Several interns, staff biologist and Regional Biologist, Bridgett Flanders-Wanner, joined a team of butterfly specialists to collect data concerning population numbers and whether or not a range of species could be found. In eight hours, over 100 butterflies were identified and then sorted into a total of more than thirteen different species. This survey was a success in terms of finding a large number of butterflies and expressing a vast range of species diversity within that number.

Plant Monitoring and Surveying:

In 2010, two graduate level college students were hired through the USFWS Student Temporary Employment Program (STEP) to complete a habitat survey and map water control infrastructure throughout the Refuge. Part of the mapping entailed monitoring plant populations. The summer of 2011, four interns are going into more detail as to the composition of plant species on the Refuge. This information will help biologists better manager habitat for bird species, pollinators and other wildlife species.

Habitat Restoration and Enhancement Projects:

The Refuge has started planting pollinator friendly plants in the historic flower beds around Headquarters to enhance the habitat available for pollinating insects. Furthermore, bee houses are being constructed this summer to further the opportunity for pollinators.

Educational Events:

Pollination Coordinator, Tami Coe, has taken it upon herself to inform others about these declining pollinators through education and outreach. For her first education outreach program, Tami presented to a class of first graders at the end of May. This outreach program included a presentation on the basics about pollination, a video about specific pollinators, and some binocular fun outside. Each child received a poster, bookmark, and a pollinator friendly plant to grow.

More recently, Tami and Refuge volunteers presented to the Burns Paiute Tribe Spanning Generations Program on June 17, 2011. Her audience was young children to elders of the Tribe. They presented an in-depth presentation, conducted an outside field class and collection, and constructed a butterfly puppet to communicate about the importance of pollination. In addition, three perennial plants were donated by the Refuge to the Burns Paiute Tribe to nurture on the Reservation.

For more information:

- A press release will be published in the Burns Times Herald on June 22 in honor of Pollination Week.
- Posters and pollinator brochures can be found at the Harney County Chamber of Commerce or at the Refuge Headquarters.
- Pollinator wheels and a pollination book (about the history of pollinators and reasons for their decline) are available at the Refuge Headquarters.
- Visit http://www.pollinator.org/ or call Tami Coe at 541-493-2612 for further information or any questions.